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that he acquired the infection at the former date, through failure to follow instructions relative to the proper disinfection of his hands upon completion of the work.

B. typhosus was isolated from the blood of five cases, and all gave positive agglutination reactions varying from 1 to 200 to 1 to 1,000 in the third week of the disease. None gave a history of antityphoid vaccination. One case terminated fatally from hemorrhage at the end of the third week.

After the removal of the carrier, the forecastle and the boatswain's quarters were thoroughly washed with antiseptic solutions followed by hot water and soap; the bedding, towels, utensils, etc., were sterilized with steam. No new cases have occurred since the termination of the incubation period.

This outbreak of a small number of cases, but of exceedingly high incidence, shows the extreme importance of thorough examination of both feces and urine before the discharge of typhoid patients. It is also of interest to note that a carrier engaged in occupations other than food handling may, under certain circumstances, be responsible for the transmission of the disease.

THE VALUE OF CERTAIN INQUIRIES ON VENEREAL DISEASE CASE REPORTS.[1]

A Study of 8,413 Case Reports in Indiana.

In the expectation of obtaining facts that may be useful in the campaign against venereal diseases, the individual case report card has been made somewhat detailed in practically all States where venereal diseases are notifiable. Ordinarily the following items of information are asked of the attending physician for every case:

Color	of the patient.
Nativity (or race)	
Sex	
Age	
Marital condition	
Occupation	
Stage	of the disease.
Source of infection	
When contracted	
Date of infection	
Diagnosis, with result of such laboratory test as may have been made	

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[1] From the Statistical Office (Field Investigations), United States Public Health Service. Prepared in cooperation with the Division of Venereal Diseases, United States Public Health Service. Acknowledgments are made to the Indiana State board of health for the use of the individual case reports.

The foregoing list is not, perhaps, typical for every State, but it is fairly illustrative of the scope and the nature of the queries appearing on venereal disease report forms. Some are less elaborate; some are more elaborate.

To obtain these data the expenditure of considerable time and effort on the part of the reporting physician is necessary. A report form containing such a list of queries is a rather formidable questionnaire for everyday use by the diagnostician and medical attendant, whose principal interests are not those of the epidemiologist or social statistician and whose chief duty, in this respect, to the health department, is merely the *prompt notification* of the existence of *every case* that comes to his attention so that the health department can take proper action. The further consideration suggests itself that if every physician reported every case in the degree of detail desired, the health departments would be swamped with a flood of data the analysis of which, even granting that the data were accurate and worth while, would necessitate the maintenance of a statistical equipment at present considerably beyond the means of the great majority of departments. It is pertinent also to reiterate some questions that already have been raised with respect to the reporting of other communicable diseases. Does the elaborateness of the report form act as a deterrent to the busy physician in the reporting of his cases? Is all of the information, when it is actually entered on the case reports, necessary? Is it given with sufficient accuracy and completeness to warrant dependable conclusions after having been subjected to statistical analysis?

It would seem that these are pertinent points to be considered, practical points from the point of view of both the health administration and the epidemiological analyst.

With the hope of throwing some light on the matter of the reporting of venereal diseases specifically as well as upon the reporting of diseases in general, the tabulation and analysis of individual case reports of venereal diseases have been undertaken. Several State health departments lent the division of venereal diseases of the Public Health Service the original reports, which were turned over to the statistical office of the scientific research division. The first material so examined consisted of 8,413 case reports made to the Indiana State board of health during the period January 1, 1918–March 31, 1920. In a preceding publication [1] the results of certain tabulations according to age, sex, and marital conditon of the persons affected were presented. These results were not regarded as conclusive as indicating the true incidence, because of certain serious limitations of the data that were pointed out, but it is believed that some rather suggestive observations were afforded. In the present publication, further tabulations of the Indiana reports are given. They are presented as illustrative material bearing on the questions of (1) the completeness with which the various queries on the report forms are answered, and (2) the character and value of the information actually entered.

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[1] King, Mary L., and Sydenstricker, Edgar, Venereal Disease Incidence at Different Ages—A tabulation of 8,413 case reports in Indiana. Public Health Reports, Dec. 24, 1920, pp. 3091-3107. Reprint No. 630.

In introducing the first publication based on this study,[1] certain known limitations of the data were pointed out, as follows:

> "In the first place, on no possible assumption can these case reports be regarded as including all of the cases of venereal diseases actually existing or occurring within a given period for any locality or area. In the second place, they are probably restricted to certain types or stages—to those cases which were at stages when infected persons were impelled to seek a physician's advice. Cases which were latent or which exhibited no acute or troublesome symptoms may be regarded as almost wholly unreported. The reports can be considered, therefore, at best as only samples of this general type in various population groups and classes. It is realized that special care must be taken in any analysis of them, and that a great deal of caution must be exercised in drawing definite conclusions. Obviously such observations as can be made must be stated in relative terms rather than in terms of actual incidence, and conclusions drawn therefrom can be regarded as only tentative."

With this general statement in mind, the case reports may be considered in detail.

The items of information called for on the Indiana case report forms naturally divide themselves into two kinds:

1. Those relating to the individual patient: Color, nativity, sex, age, marital condition, and occupation.
2. Those relating to the disease with which the patient is affected: Physician's diagnosis, result of laboratory test, stage, source of infection (congenital, innocent, marital, illicit, etc.), place where infection was incurred, and result of laboratory test.

The value of the various items of information may be discussed with three points of view in mind, namely—

(*a*) The accuracy and exactness with which the information is actually given on the reports.

(*b*) The number of reports on which dependable or usable information is given—that is, the size of the *sample* when the reports available for a given item are taken as a whole or subdivided into various groups.

(*c*) Availability of population distributions for nativity, sex, age, marital condition, and occupation and combinations thereof as bases for adjusting corresponding distributions of venereal disease cases in order to obtain relative age variations in incidence.

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[1] King and Sydenstricker, loc. cit.

Taking up the first group of items, the following summary for white cases shows the proportion of the reports for which specified items of information were given.

TABLE I.—*Number and per cent of venereal disease reports made for white persons to Indiana State Board of Health, Jan. 1, 1918–Mar. 31, 1920, on which specified information relating to the individual was reported.*

Item of information.	Number	Per cent of total.
Total	8,413	100.0
Sex	8,405	99.9
Age	8,071	95.9
Nativity	6,317	75.1
Marital condition	8,159	97.0
Occupation	4,077	48.5

Practically all of the reports contained definite answers to questions relating to sex, age, and marital conditions. In the following table the distribution of 8,153 reports according to sex and marital condition is shown:

TABLE II.—*Number and per cent of venereal disease cases reported to Indiana State Board of Health during the period 1918–1920, by sex and marital condition.*

Marital condition.	Number.			Per cent of total.		
	Both sexes.	Male.	Female.	Both sexes.	Male.	Female.
Total	8,153	6,168	1,985	100.0	100.0	100.0
Single	5,096	4,320	776	62.5	70.0	39.1
Married	2,795	1,724	1,071	34.3	28.0	54.0
Widowed, divorced, and separated	262	124	138	3.2	2.0	6.9

Over two-thirds of the cases among males were among single males, whereas less than 40 per cent of the female cases were single. The proportion of female cases occurring among widowed, divorced, or separated persons was over three times as great as that for males. It thus appears that the proportion of cases among women who were married or who had been married was twice as great as that for males, in spite of the probability that a considerable proportion of the single females were prostitutes. This fact obviously is in line with the observation to which reference again will be made, that infections of women by their husbands is a frequent source of venereal disease among women.

The information as to nativity can not be utilized advantageously for three reasons: (1) No population data will be available for correcting or adjusting the distribution of cases according to various nativities until the results of the 1920 census are published in detail; (2) the cases, except for one or two large groups, are so scattered that comparisons of age distributions, for example, of the various groups are of doubtful value because of small numbers; (3) the entries on the reports are indefinite in many instances. The distribution of cases according to nativity for each sex is shown in the following summary:

TABLE III.—*Number and per cent of venereal disease cases in white persons reported to Indiana State Board of Health, Jan. 1, 1918–Mar. 31, 1920, classified by nativity of patient.*

Nativity as stated by patient.	Number.			Per cent.		
	Both sexes.	Male.	Female.	Both sexes.	Male.	Female.
Total	8,406	6,375	2,031	100.0	100.0	100.0
Nativity not stated	2,094	1,495	599	24.9	23.5	29.5
American	5,751	4,356	1,395	68.4	68.4	68.7
Greek	102	102	0	1.2	1.6	....
Austro-Hungarian	101	95	6	1.2	1.5	.3
Italian	69	66	3	.8	1.0	.1
Polish	58	52	6	.7	.8	.3
Rumanian	36	35	1	.4	.5	.1
German	32	23	9	.4	.4	.4
34 other nativities	163	151	12	2.0	2.3	.6

The occupational data are least satisfactory of the first group of items, not only because occupation is given for less than 50 per cent of the cases, but also because of the ambiguity of the entries. A large variety of occupations are found on the case reports (267 for males and 92 for females), and the number of cases for nearly all of them is too small to afford a dependable sample for utilizing comparative distributions.

For only five occupations of males were there as many as 100 cases, these being farmers (166), coal miners (215), "general laborers" (400), machinists, including toolmakers and millwrights, (212), and salesmen (106), the occupations for the remaining cases being either unknown or scattered among 262 classes. For only one occupation of females were there as many as 100 cases, this being that of domestic servant (154). The remainder were either not stated or were scattered among 91 occupations. The occupations were so ambiguously stated as to preclude any satisfactory grouping. Even if the statements had been definite, there are no comparable data as to population available for adjusting or correcting the age or other distribution of cases.

Turning now to the second group of items, those relating to the disease with which the patient is affected, it is clear that the entries were made on the reports in a less satisfactory manner than were those in the group which we have just considered, in spite of the fact that, from the point of view of the purpose of the reports, they may be regarded as of equal if not greater importance. A diagnosis of some sort is, of course, stated on every report, and on practically all reports the date on which the report was made is given. The following summarization shows for all venereal diseases and for gonorrhea and syphilis separately the number and per cent of the reports on which information as to diagnosis, stage, source of infection, place of infection, and result of laboratory test was given.

TABLE IV.—*Relative frequency with which information relating to result of laboratory test, stage, and source of infection, and place where infection was incurred appeared on case reports of venereal diseases made for white persons to Indiana State Board of Health, Jan. 1, 1918–Mar. 31, 1920.*[1]

Disease.	Per cent of total cases of each disease for which specified item of information was given.			
	Result of laboratory test.	Stage.	Source of infection.	Place where infection was incurred.
All venereal diseases	39.4	....	29.5	23.4
Gonorrhea	13.5	6.7	31.2	27.8
Syphilis	75.6	65.9	23.3	15.8

[1] Total cases, 8,413: Gonorrhea, 4,708; syphilis, 2,969.

The data relating to "duration" of venereal diseases, as given on 2,132 case reports, do not, of course, indicate the duration of the infection in any sense of the term, but afford only a rough idea of the duration of the disease before applying for medical advice or treatment. The data, moreover, do not necessarily show specifically the length of time since infection. They are of interest, however, in showing at this stage of the campaign against venereal diseases what proportion of cases seeking treatment are cases of long standing and will be of greater value when compared with similar records in succeeding years.

The data are briefly summarized in the following series of percentages of total cases (for which "duration" was stated) in certain time intervals.

TABLE V.—*Duration of venereal disease cases at time of diagnosis: Percentage distributions according to various "durations."*[1]

Duration of disease as stated by patient.	Gonorrhea.	Syphilis.	Chancroid.
All durations	100.0	100.0	100.0
Less than 1 week	14.1	1.2	17.8
Less than 1 month	41.8	6.8	51.1
Less than 3 months	63.7	21.4	93.4
Less than 1 year	79.5	40.0	94.4
1 year, but less than 5 years	15.6	27.9	3.4
5 years or longer	4.9	32.1	2.2

[1] Percentages based on 2,132 cases of gonorrhea, 1,053 cases of syphilis, and 45 cases of chancroid. The statements of patients were recorded as to "duration of the disease," not specifically as to time since infection.

The number of gonorrheal cases for which the "stage of disease" was reported is too small to furnish indications of much value. As shown in the following summary, slightly more than half of 314 cases were diagnosed as "acute." The proportion of acute cases was larger among females than among males.

TABLE VI.—*Distribution of 314 cases of gonorrhea (244 males and 70 females) reported to Indiana State Board of Health Jan. 1, 1918–Mar. 31, 1919, according to stage of disease.*

Stage of disease.	Both sexes.	Male.	Female.
All stages	100	100	100
Acute	55	53	61
Chronic	45	47	39

When the 314 cases of gonorrhea are further subdivided according to marital condition, the proportion of cases which were diagnosed as "acute" was nearly four times as high as that diagnosed as "chronic," in the case of single females, whereas for single and married males and married females the distribution is approximately equal. The number of cases considered is, of course, too small to justify any conclusion, as shown in the following table:

TABLE VII.—*Distribution of 314 cases*[1] *of gonorrhea reported to Indiana State Board of Health, Jan. 1, 1918–Mar. 31, 1919, according to stage of disease, sex, and marital condition.*

Stage of disease.	Male.		Female.	
	Single.	Married.	Single.	Married.
All stages	100	100	100	100
Acute	52	57	78	51
Chronic	48	43	22	49

[1] Of these 314, 244 were males and 70 females; of the 244 males, 197 were single and 47 married; of the 70 females, 27 were single and 43 married.

The number of cases of syphilis for which the "stage of disease" was stated, was 2,018, of which 1,371 were male and 647 female. Their distribution according to "stage" for both sexes as well as for each sex was as follows:

TABLE VIII.—*Distribution of 2,018 cases of syphilis (1,371 males and 647 females) according to "stage of disease," as stated on case reports made to Indiana State Board of Health, Jan. 1, 1918, to Mar. 31, 1920.*

Stage of disease.	Per cent.		
	Both sexes.	Male.	Female.
All stages	100.0	100.0	100.0
Primary	19.2	20.3	16.7
Secondary	50.2	49.4	52.9
Tertiary	30.6	30.3	31.4

The great majority of syphilitics, it would appear from this sample, seeking the advice of a physician were in the later stages of the disease. The proportions for males and females are quite similar.

When the cases at different stages are compared for various ages, the distributions are not unlike. Although it might have been expected that a larger proportion of the cases in the secondary and tertiary stages would be in the older age groups, this is indicated only in slight degree for cases in the tertiary stage only. The percentage distributions are given below in summarized form:

TABLE IX.—*Distribution of cases of syphilis at different "stages" according to the age of persons affected, as reported to Indiana State Board of Health, Jan. 1, 1918, to Mar. 31, 1920.*[1]

Age at time of report.	Stage of disease.		
	Primary.	Secondary.	Tertiary.
Under 20	18.3	18.3	13.0
20 to 29	46.9	51.0	46.7
30 to 39	24.0	21.7	24.3
40 and over	12.9	9.0	17.0

[1] For 350 cases in primary stage, 922 in secondary stage, and 531 in tertiary stage.

On 1,951 reports the source of infection was stated. Most of these statements evidently were written down as made by the patients, and a variety of expressions appear. Among the most common were: Former husband, former wife, present husband, present wife, congenital, hereditary, another child, sweetheart, fiance, lady friend, gentleman friend, gonorrheal infection at birth, promiscuous intercourse, country girl, hired girl, hired man, soldier, prostitute, street walker, clandestine prostitute, rape, illicit intercourse, dentist, kissing, traveling man, traveling show girl, nurse maid. In many cases the name of the person from whom the infection was alleged to have been contracted was given, but his or her status was not given. In attempting to analyze these reports, a broad classification of the sources of infection was made, as follows: Congenital, innocent (exclusive of congenital infections and infections incurred through sexual relations), and sexual. The distribution of the 1,951 cases according to this classification is shown in Table X.

TABLE X.—*Distribution of 1,951 venereal disease cases according to source of infection as reported to Indiana State Board of Health, Jan. 1, 1918–Mar. 31, 1920.*

Source of infection as reported.	Number.	Per cent.
Total	1,951	100.00
Congenital	83	4.2
"Innocent"[1]	69	3.5
Sexual	1,799	92.2
		100.0
Marital	318	17.7
Illicit	1,481	82.3

[1] From towels, shaving utensils, cups, toilet, etc. (i. e., exclusive of congenital and through sexual relations).

As may be anticipated, a preponderating proportion (92 per cent) of the infections were contracted in the course of sexual intercourse. The number of congenital infections (4.2 per cent) was small, but not greatly in excess of those acquired "innocently" (3.5 per cent).

The 1,799 infections which were stated to have been acquired in sexual intercourse are considered further in Table XI, in which the distribution according to marital and illicit relations is compared for sex.

TABLE XI.—*Distribution of 1,799 cases of venereal diseases according to source of infection compared by sex of persons affected, as reported to Indiana State Board of Health, Jan. 1, 1918–Mar. 31, 1920.*

Source of infection as reported.	Number.		Per cent.	
	Male.	Female.	Male.	Female.
Total[1]	1,368	431	100	100
Marital	71	247	5	57
Illicit	1,297	184	95	43

[1] Exclusive of congenital and "innocent."

Practically all (95 per cent) of infections among male cases were reported to have been acquired in illicit intercourse, while less than half (43 per cent) of the female cases were reported as having been due to this source. The number of female cases is relatively small, and considering the possibility that a considerable number of the female cases who reported infections acquired through illicit sexual relations were prostitutes, the proportion of venereal infections acquired by women from their husbands is significantly large.

The importance of the professional prostitute as a source of infection is only suggested by the reports; it is not accurately shown, because only a small proportion of the reports contain any definite statement on this point, and because some of the entries in all probability were not based on a very clear definition of professional prostitute. The fact is worth recording, however, that of 573 cases of gonorrhea and syphilis among white single males for which definite statements were made 449, or 78 per cent, were stated to have been infected by professional prostitutes. If we exclude all infections except those incurred in sexual intercourse, the percentage is 89. When subdivided into age groups, we have the following percentages:

Age of infected person.	Per cent of infections from professional prostitutes.
Under 20	87
20 to 24	93
25 to 29	87
30 and over	78

The slight variations are without significance, of course, because of the small number of cases.

The percentage 89 is considerably in excess of that for 10,000 venereal cases reported for American soldiers as shown by the report of the Surgean General of the Army for 1920. If we take as a comparable figure the complement of the percentage of soldiers who "paid nothing" for the infecting intercourse, we have 61 as the minimum percentage of venereal infections which were incurred in intercourse with professional or commercial prostitutes.[1]

In this connection some recent figures for the German Army are of interest. The percentage of total venereal infections received from professional prostitutes, for the German Army in 1915, was 21.3.[2] This percentage was considerable less than apparently similar percentages for 1900 and 1905, which were 63.4 and 46.8, respectively.

Taking only those infections which were stated to have been acquired in illicit or extra-marital intercourse, a comparison for each sex may be made of the distribution according to the marital condition of the person affected. This is done in Table XII.

TABLE XII.—*Distribution of 1,481 cases of venereal diseases incurred through illicit sexual relations, according to marital condition*[1] *of persons affected, compared for males and females.*

Marital condition.	Number.		Per cent.	
	Male.	Female.	Male.	Female.
Total	1,297	184	100	100
Single	1,015	136	78	74
Married[1]	282	48	22	26

[1] Married at date of diagnosis. The possibility that infection may bave been incurred before marriage should be kept in mind when interpreting these distributions.

Here it is seen that the distribution of infections acquired in illicit sexual relations among married and single persons is practically the same for males and females. Before drawing any conclusions from these data, however, due consideration should be given to at least two possible sources of error: (1) The marital condition of the persons affected is their marital state at the time of diagnosis and report, whereas the infections may have been acquired prior to marriage. Since the length of time married was not reported, it was not possible to determine the possible effect of this factor. Obviously, however, such effect as it might have had would be to increase the proportion of infections acquired by married males through illicit intercourse. (2) A disproportionate number of cases of single persons who were prostitutes may have been included, thus affecting the validity of the sample for comparing single and married females.

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[1] Report of the Surgeon General, U. S. Army, to the Secretary of War, 1920. Table 89, p. 252.

[2] Gans. Deutsche. Med. Wchnschr., July 15, 1920.

In Table XIII an attempt is made to compare the age distributions of the 1,951 venereal disease cases for persons according to sex and marital condition from the point of view of "source of infection." The small numbers in most of the distributions render them of doubtful value; at the same time, there is a certain consistency in them with the results of general observation which is interesting.

TABLE XIII.—*Age distribution of 1,951 cases of venereal diseases compared for different sources of infection as stated on case reports to Indiana State Board of Health, Jan. 1, 1918–Mar. 31, 1920.*

Age group.	Source of infection as stated by patient.							
	Congenital, both sexes.	"Innocent,"[1] both sexes.	Marital.		Illicit.			
					Single.		Married.[2]	
			Males.	Females.	Males.	Females.	Males.	Females.
				NUMBER.				
All ages........	83	69	71	247	1,015	136	282	48
Under 15............	65	13	1	3	10	21	....	....
15 to 19............	10	10	3	51	278	75	15	8
20 to 24............	2	13	20	70	413	28	64	13
25 to 29............	2	16	20	50	174	6	69	12
30 to 34............	2	6	9	31	69	3	57	7
35 to 39............	1	1	10	25	44	1	37	6
40 to 44............	....	5	3	7	12	2	18	....
45 and over..........	1	5	5	10	15	....	22	2
				PER CENT.				
All ages........	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 15............	78.3	18.8	1.4	1.2	1.0	15.4	....	....
15 to 19............	12.0	14.5	4.2	20.6	27.4	55.1	5.3	16.7
20 to 24............	2.4	18.8	28.2	28.4	40.7	20.6	22.7	27.1
25 to 29............	2.4	23.2	28.2	20.2	17.1	4.4	24.5	25.0
30 to 34............	2.4	8.7	12.7	12.5	6.8	2.2	20.2	14.6
35 to 39............	1.2	1.5	14.1	10.1	4.3	.7	13.1	12.5
40 to 44............	....	7.2	4.2	2.8	1.2	1.5	6.4	....
45 and over..........	1.2	7.2	7.0	4.1	1.5	....	7.8	4.2

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[1] From towels, shaving utensils, cups, toilet, etc. (exclusive of congenital and through sexual relations).

[2] Married at the date of diagnosis. The possibility that infection may have occurred before marriage should be kept in mind when interpreting these distributions of cases according to age.

A more accurate picture, perhaps, of the variations in incidence according to age among the various groups of persons will be given if the age distribution of the population in Indiana is taken into account. Since morbidity rates would be misleading on account of the incomplete data, *relative variations* in the indicated incidence according to age (upon the assumption that the age distribution of the cases in each group is a fair sample) have been computed and are presented in Table XIV.

TABLE XIV.—*Relative variations*[1] *in the incidence of venereal diseases according to age among single and married persons of each sex, by source of infection as stated by patient. Based on 1,951 case reports to Indiana State Board of Health (see Table XIII).*

Age period.	Source of infection as stated by patient.					
	Males.			Females.		
	Single, through illicit relations.	Married.		Single, through illicit relations.	Married.	
		Illicit[2] relations.	Marital relations.		Illicit[2] relations.	Marital relations.
15 to 19	0.7	19.6	15.6	1.2	6.7	8.2
20 to 24	1.4	3.8	4.8	.9	2.4	2.5
25 to 34	1.2	1.8	1.6	.4	1.4	1.8
35 to 44	.7	.8	.7	.3	.5	.5
45 and over	.2	.2	.2	....	.1	.1

[1] These are in the form of indices computed by dividing the percentage of total cases for any marital group at the specified age by the percentage of the total population in Indiana of the same marital group at the same age as enumerated in 1910.

[2] These persons were married at the date of diagnosis. It is not indicated on the case reports whether or not infections were incurred before or since marriage.

The relatively high incidence of venereal diseases in the early ages (15 to 19) is shown for both males and females as the result of both illicit and marital sexual relations, except for single males. The suggestion is also afforded that infections incurred by married males were incurred chiefly before marriage. The limitations of the data, however, are great. Aside from the small number of cases, the probability of only a selected class of individuals being represented must be considered. No definite conclusion is in any sense warranted.

The intention in placing the item "place of exposure" on the form was to obtain more detailed information regarding the conditions under which venereal infections were incurred. The intent of the query, however, was not understood in the same way by all of the physicians who made entries. A variety of answers appear, such as the name of the city or the name of the county or State, France, Germany, Russia, Siberia, etc., "in service abroad," "in service in the United States," or not specified, as public dance hall, pool room, or saloon, railroad track, race track, fair grounds, automobile, park, woods, country, "in the open," street, alley, house, apartment, flat, hotel, restaurant, rooming house, factory, barn, "at her house," Pullman car, hospital, boat, store, office, etc. On only 1,837 (23 per cent) of the 7,891 reports stating the sex and marital condition of the persons affected was any information given as to place of exposure.

These entries, in a general way, classify themselves into those which specify military service and those which specify in some detail the character of the place of exposure. Of the 1,117 case reports for single males for which general information is given, 42, or 3.8

per cent, stated that the infection was incurred in military service abroad; and a total of 62, or 5.6 per cent, when in military service in the United States and abroad. Considering only the 416 case reports for unmarried males and females for which specified data as to the place of exposure were given, classification and distribution are shown in Table XV.

TABLE XV.—*Distribution of cases of venereal diseases among unmarried males reported to Indiana State Board of Health Jan. 1, 1918–Mar. 31, 1920, according to the "place of exposure."*

Place where exposure to infection was stated to have occurred.	Number of case reports considered.	Per cent of total case reports considered.
All places	416	100.0
House or apartment[1]	192	46.2
Hotel or rooming house	58	13.9
In automobile	42	10.1
In the open[2]	96	23.1
Other places specified[3]	28	6.7

[1] 52 of these were definitely stated to have been "at her home" or "at his home."
[2] In parks, country, street, alley, etc.
[3] Including factory, store, office, public dance hall (2), pool room, saloon, Pullman car (2), hospital, boat.

Conclusions.

From the point of view of the utility of the information collected on the case report of venereal diseases, it is evident that, judging from the experience afforded by the Indiana reports, much of the data is of doubtful value. At best any given item is worth while only if it is entered in the same way, with exactly the same understanding of its sense and meaning, by every reporting physician. Even then, unless *all* cases are reported we have only a *sample*, probably limited to a specified type of affected person and stage of the disease.

Summarizing in more detail, the queries relating to sex, age, and marital condition are answered with a fairly good degree of completeness and are in all probability accurate except for age in the case of young children. The queries regarding nativity or race and occupation are worthless from any point of view. The results of laboratory tests as at present entered obviously are of little value except to show that a test was made. The extent to which tests are made of all suspected cases can not be ascertained, for the reason that negative results are not included. The stage of the disease at the time of report is so rarely stated in the case of gonorrhea as to yield no dependable information. The queries relating to source of infection and place of infection yield little information, for the reasons that entries are made in only a small proportion of cases, and that when made, the purpose of the queries is not thoroughly understood and the answers are inexact and often meaningless.

It would seem clear that too much is asked of the reporting physician on the case report cards. He is, in effect, made an epidemiological and social enumerator by requiring of him information of a kind that should be gathered by specially trained enumerators on a definite, consistent plan. Primarily, the health department expects of the physician the prompt notification of every case of venereal disease which he attends. He is expected to give only that information which is necessary for the immediate needs of the department in its administrative activities. The suggestion is made, therefore, that this information should concern itself with the diagnosis of the case, the identity of the infected person (including sex, age, and color) and the specific source of the particular infection. All other information properly may be regarded as epidemiological and should be collected in the course of special studies by carefully trained investigators according to a well considered plan.

DIVISION OF VENEREAL DISEASES.

CASES REPORTED, ADMISSIONS TO CLINICS, AND ARSPHENAMINE DOSES ADMINISTERED DURING FISCAL YEAR ENDED JUNE 30, 1921.

In addition to the 442 clinics represented in the following table, reports were submitted by 29 general hospitals and dispensaries, 6 State hospitals for the insane, and 23 correctional and penal institutions to which there were admitted 3,973 cases of syphilis, 3,861 cases of gonorrhea, and 442 cases of chancroid; 27,925 doses of arsphenamine were administered.